# AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

#### LISTING OF CLAIMS:

1. (currently amended): A modified bio-related substance, wherein at least one poly(alkylene glycol)oxy group represented by the following formula (1):

$$CH_2(OA^1)_n$$
  $CH_2(OA^2)_mOR$   $....(1)$   $CH_2(OA^2)_mOR$ 

wherein R is a hydrocarbon group having 1 to 24 carbon atoms, OA<sup>1</sup> and OA<sup>2</sup> are each an oxyalkylene group having 2 to 4 carbon atoms, R and OA<sup>2</sup> are the same or different from each other in one molecule, the groups represented by R are the same or different from each other in one molecule, and the groups represented by OA<sup>2</sup> are the same or different from each other in one molecule, n and m are each average number of moles of the oxyalkylene group added, n represents 0 to 1000, and m represents 10 to 1000,

is combined in a molecule.

2. (original): The modified bio-related substance according to claim 1, wherein in the formula (1), R is a hydrocarbon group having 1 to 10 carbon atoms, OA<sup>1</sup> and OA<sup>2</sup> are each an oxyalkylene group having 2 to 3 carbon atoms, n is 0 to 500, and m is 10 to 1000.

- 3. (original): The modified bio-related substance according to claim 1, wherein in the formula (1), R is a methyl group, OA<sup>1</sup> and OA<sup>2</sup> are each an oxyethylene group, n is 0 to 50, and m is 20 to 800.
- 4. (original): The modified bio-related substance according to claim 1, wherein in the formula (1), n is 0.
- 5. (original): The modified bio-related substance according to claim 1, wherein in the formula (1), n is 1 to 50.
- 6. (original): The modified bio-related substance according to claim 1, wherein the bio-related substance has a physiological activity on a body.
- 7. (original): The modified bio-related substance according to claim 1, wherein the bio-related substance is a protein or a polypeptide.
- 8. (original): The modified bio-related substance according to claim 1, wherein the bio-related substance is an anticancer drug.
- 9. (original): The modified bio-related substance according to claim 1, wherein the bio-related substance is an antifungal drug.
- 10. (original): The modified bio-related substance according to claim 1, wherein the bio-related substance is a phospholipid.
- 11. (original): The modified bio-related substance according to claim 3, wherein in the formula (1), n is 0.
- 12. (original): The modified bio-related substance according to claim 3, wherein in the formula (1), n is 1 to 50.

- 13. (original): The modified bio-related substance according to claim 11, wherein the bio-related substance has a physiological activity on a body.
- 14. (original): The modified bio-related substance according to claim 11, wherein the bio-related substance is a protein or a polypeptide.
- 15. (original): The modified bio-related substance according to claim 11, wherein the bio-related substance is an anticancer drug.
- 16. (original): The modified bio-related substance according to claim 11, wherein the bio-related substance is an antifungal drug.
- 17. (original): The modified bio-related substance according to claim 11, wherein the bio-related substance is a phospholipid.
- 18. (original): The modified bio-related substance according to claim 12, wherein the bio-related substance has a physiological activity on a body.
- 19. (original): The modified bio-related substance according to claim 12, wherein the bio-related substance is a protein or a polypeptide.
- 20. (original): The modified bio-related substance according to claim 12, wherein the bio-related substance is an anticancer drug.
- 21. (original): The modified bio-related substance according to claim 12, wherein the bio-related substance is an antifungal drug.
- 22. (original): The modified bio-related substance according to claim 12, wherein the bio-related substance is a phospholipid.

23. (currently amended): An intermediate for a modified bio-related substance, which is represented by the following formula (2):

$$CH_2(OA^1)_n$$
— $X$   
 $CH(OA^2)_mOR$  .....(2)  
 $CH_2(OA^2)_mOR$ 

wherein R is a hydrocarbon group having 1 to 24 carbon atoms, OA<sup>1</sup> and OA<sup>2</sup> are each an oxyalkylene group having 2 to 4 carbon atoms, R and OA<sup>2</sup> are the same or different from each other in one molecule, the groups represented by R are the same or different from each other in one molecule, and the groups represented by OA<sup>2</sup> are the same or different from each other in one molecule, n and m are each average number of moles of the oxyalkylene group added, n represents 0 to 1000, m represents 10 to 1000, and X represents a functional group capable of chemically reacting with an unmodified bio-related substance.

- 24. (original): The intermediate according to claim 23, wherein in the formula (2), R is a hydrocarbon group having 1 to 10 carbon atoms, OA<sup>1</sup> and OA<sup>2</sup> are each an oxyalkylene group having 2 to 3 carbon atoms, n is 0 to 500, and m is 10 to 1000.
- 25. (original): The intermediate according to claim 23, wherein in the formula (2), R is a methyl group, OA<sup>1</sup> and OA<sup>2</sup> are each an oxyethylene group, n is 0 to 50, and m is 20 to 800.
- 26. (original): The intermediate according to claim 23, wherein in the formula (2), n is 0.
- 27. (original): The intermediate according to claim 23, wherein in the formula (2), n is 1 to 50.

- 28. (original): The intermediate according to claim 23, wherein the functional group is a functional group capable of reacting with an amino group, a mercapto group, an unsaturated bond, or a carboxyl group of the unmodified bio-related substance.
- 29. (original): The intermediate according to claim 23, wherein X is a group selected from the group (I):

## Group (I)

wherein Z represents a simple alkylene group or an alkylene group containing an ether bond, an ester bond, a urethane bond, an amide bond, a carbonate bond, or a secondary amino group and Y represents a hydrocarbon group having 1 to 10 carbon atoms which may contain fluorine atom(s).

30. (original): The intermediate according to claim 23, wherein X is a group selected from the group (II):

### Group (II)

$$---Z--NH_2$$
 (g)  $---NH_2$  (j)  $---Z--COOH$  (k)

wherein Z represents a simple alkylene group or an alkylene group containing an ether bond, an ester bond, a urethane bond, an amide bond, a carbonate bond, or a secondary amino group.

31. (currently amended): A process for producing a modified bio-related substance wherein at least one poly(alkylene glycol)oxy group represented by the following formula (1):

$$CH_2(OA^1)_n$$
  $CH_2(OA^2)_mOR$   $....(1)$   $CH_2(OA^2)_mOR$ 

wherein R is a hydrocarbon group having 1 to 24 carbon atoms, OA¹ and OA² are each an oxyalkylene group having 2 to 4 carbon atoms, R-and OA² are the same or different from each other in one molecule, the groups represented by R are the same or different from each other in one molecule, and the groups represented by OA² are the same or different from each other in one molecule, n and m are each average number of moles of the oxyalkylene group added, n represents 0 to 1000, and m represents 10 to 1000, is combined in a molecule,

comprising a step of combining the intermediate according to claim 23 with a bio-related substance.

- 32. (original): The process according to claim 31, wherein the bio-related substance has a physiological activity on a body.
- 33. (original): The process according to claim 31, wherein the bio-related substance is a protein or a polypeptide.
- 34. (original): The process according to claim 31, wherein the bio-related substance is an anticancer drug.

- 35. (original): The process according to claim 31, wherein the bio-related substance is an antifungal drug.
- 36. (original): The process according to claim 31, wherein the bio-related substance is a phospholipid.
- 37. (original): The intermediate according to claim 29, wherein X is a group represented by (a) in the group (I).
- 38. (original): The intermediate according to claim 29, wherein X is a group represented by (d) in the group (I).
- 39. (original): The intermediate according to claim 29, wherein X is a group represented by (e) in the group (I).
- 40. (original): The intermediate according to claim 29, wherein X is a group represented by (f) in the group (I).
- 41. (original): The intermediate according to claim 25, wherein in the formula (2), n is 0.
- 42. (original): The intermediate according to claim 25, wherein in the formula (2), n is 1 to 50.
- 43. (original): The intermediate according to claim 41, wherein the functional group is a functional group capable of reacting with an amino group, a mercapto group, an unsaturated bond, or a carboxyl group of the unmodified bio-related substance.
- 44. (original): The intermediate according to claim 41, wherein X is a group selected from the group (I):

## Group (I)

wherein Z represents a simple alkylene group or an alkylene group containing an ether bond, an ester bond, a urethane bond, an amide bond, a carbonate bond, or a secondary amino group and Y represents a hydrocarbon group having 1 to 10 carbon atoms which may contain fluorine atom(s).

45. (original): The intermediate according to claim 41, wherein X is a group selected from the group (II):

# Group (II)

$$--$$
Z $--$ NH $_2$  (g)  $--$ NH $_2$  (j)  $--$ Z $--$ COOH (k)

wherein Z represents a simple alkylene group or an alkylene group containing an ether bond, an ester bond, a urethane bond, an amide bond, a carbonate bond, or a secondary amino group.

46. (original): The intermediate according to claim 42, wherein the functional group is a functional group capable of reacting with an amino group, a mercapto group, an unsaturated bond, or a carboxyl group of the unmodified bio-related substance.

47. (original): The intermediate according to claim 42, wherein X is a group selected from the group (I):

### Group (I)

wherein Z represents a simple alkylene group or an alkylene group containing an ether bond, an ester bond, a urethane bond, an amide bond, a carbonate bond, or a secondary amino group and Y represents a hydrocarbon group having 1 to 10 carbon atoms which may contain fluorine atom(s).

48. (original): The intermediate according to claim 42, wherein X is a group selected from the group (II):

#### Group (II)

$$--$$
Z $--$ NH<sub>2</sub> (g)  $--$ NH<sub>2</sub> (j)  $--$ Z $--$ COOH (k)

wherein Z represents a simple alkylene group or an alkylene group containing an ether bond, an ester bond, a urethane bond, an amide bond, a carbonate bond, or a secondary amino group.

49. (original): The intermediate according to claim 44, wherein X is a group represented by (e) in the group (I).

- 50. (original): The intermediate according to claim 47, wherein X is a group represented by (e) in the group (I).
- 51. (currently amended): A polyalkylene glycol derivative substantially containing no secondary hydroxyl group and being a starting material for the intermediate according to claim 23, which is represented by the following formula (p):

wherein R is a hydrocarbon group having 1 to 24 carbon atoms, OA<sup>1</sup> and OA<sup>2</sup> are each an oxyalkylene group having 2 to 4 carbon atoms, R and OA<sup>2</sup> are the same or different from each other in one molecule, the groups represented by R are the same or different from each other in one molecule, and the groups represented by OA<sup>2</sup> are the same or different from each other in one molecule, n and m are each average number of moles of the oxyalkylene group added, n represents 0 to 1000, and m represents 10 to 1000.

- 52. (original): The polyalkylene glycol derivative according to claim 51, wherein in the formula (p), R is a hydrocarbon group having 1 to 10 carbon atoms, OA<sup>1</sup> and OA<sup>2</sup> are each an oxyalkylene group having 2 to 3 carbon atoms, n represents 0 to 500, and m represents 10 to 1000.
- 53. (original): The polyalkylene glycol derivative according to claim 51, wherein in the formula (p), R is a methyl group, OA<sup>1</sup> and OA<sup>2</sup> are each an oxyethylene group, n represents 0 to 50, and m represents 20 to 800.

- 54. (original): The polyalkylene glycol derivative according to claim 51, wherein in the formula (p), n represents 0.
- 55. (original): The polyalkylene glycol derivative according to claim 51, wherein in the formula (p), n represents 1 to 50.
- 56. (original): The polyalkylene glycol derivative according to claim 51, wherein polydispersity Mw/Mn in all the peaks from the starting point of elution to the end point of elution satisfies the relationship:

 $Mw/Mn \le 1.07$ 

in gel permeation chromatography of the polyalkylene glycol derivative represented by the formula (p).

57. (original): The polyalkylene glycol derivative of the formula (p) according to claim 51, which is produced using a compound of the formula (4) as a starting material and satisfies the following parameter:

 $Hrd/Mpx10000000 \le 3$ 

Mp: a molecular weight corresponding to the peak top obtained from gel permeation chromatography of the formula (p),

Hrd: a ratio of hydroxyl group residue contained in the alkyl group R at the polyoxyalkylene chain terminal end at the 2- and 3-positions in the compound of the formula (4).

58. (original): The polyalkylene glycol derivative of the formula (p) according to claim 56, which is produced using a compound of the formula (4) as a starting material and satisfies the following parameter:

# $Hrd/Mpx1000000 \le 3$

Mp: a molecular weight corresponding to the peak top obtained from gel permeation chromatography of the formula (p),

Hrd: a ratio of hydroxyl group residue contained in the alkyl group R at the polyoxyalkylene chain terminal end at the 2- and 3-positions in the compound of the formula (4).

- 59. (original): The polyalkylene glycol derivative according to claim 53, wherein in the formula (p), n is 0.
- 60. (original): The polyalkylene glycol derivative according to claim 53, wherein in the formula (p), n is 1 to 50.
- 61. (original): The polyalkylene glycol derivative according to claim 54, which satisfies the following parameter:

$$M2/(M1+M2)x100 \le 10$$

M1: an integral value of the methyl group originated from the mesyl group derived from the hydroxyl group at the 1-position directly bonded to the glycerin skeleton when a compound represented by the formula (p) is reacted with methanesulfonyl chloride to obtain a mesylated compound and a nuclear magnetic resonance spectrum thereof is measured as a deuterated methanol solution,

M2: an integral value of the methyl group originated from the mesyl group derived from the hydroxyl group of the polyalkylene glycol chain.

62. (original): The polyalkylene glycol derivative according to claim 59, wherein polydispersity Mw/Mn in all the peaks from the starting point of elution to the end point of elution satisfies the relationship:

 $Mw/Mn \le 1.07$ 

in gel permeation chromatography of the polyalkylene glycol derivative represented by the formula (p).

63. (original): The polyalkylene glycol derivative of the formula (p) according to claim 59, which is produced using a compound of the formula (4) as a starting material and satisfies the following parameter:

 $Hrd/Mpx 1000000 \le 3$ 

Mp: a molecular weight corresponding to the peak top obtained from gel permeation chromatography of the formula (p),

Hrd: a ratio of hydroxyl group residue contained in the alkyl group R at the polyoxyalkylene chain terminal end at the 2- and 3-positions in the compound of the formula (4).

64. (original): The polyalkylene glycol derivative of the formula (p) according to claim 62, which is produced using a compound of the formula (4) as a starting material and satisfies the following parameter:

 $Hrd/Mpx1000000 \le 3$ 

Mp: a molecular weight corresponding to the peak top obtained from gel permeation chromatography of the formula (p),

Hrd: a ratio of hydroxyl group residue contained in the alkyl group R at the polyoxyalkylene chain terminal end at the 2- and 3-positions in the compound of the formula (4).

65. (original): The polyalkylene glycol derivative according to claim 64, which satisfies the following parameter:

$$M2/(M1+M2)x100 \le 10$$

M1: an integral value of the methyl group originated from the mesyl group derived from the hydroxyl group at the 1-position directly bonded to the glycerin skeleton when a compound represented by the formula (p) is reacted with methanesulfonyl chloride to obtain a mesylated compound and a nuclear magnetic resonance spectrum thereof is measured as a deuterated methanol solution,

M2: an integral value of the methyl group originated from the mesyl group derived from the hydroxyl group of the polyalkylene glycol chain.

66. (original): The polyalkylene glycol derivative according to claim 60, wherein polydispersity Mw/Mn in all the peaks from the starting point of elution to the end point of elution satisfies the relationship:

$$Mw/Mn \le 1.07$$

in gel permeation chromatography of the polyalkylene glycol derivative represented by the formula (p).

67. (original): The polyalkylene glycol derivative of the formula (p) according to claim 60, which is produced using a compound of the formula (4) as a starting material and satisfies the following parameter:

 $Hrd/Mpx1000000 \le 3$ 

Mp: a molecular weight corresponding to the peak top obtained from gel permeation chromatography of the formula (p),

Hrd: a ratio of hydroxyl group residue contained in the alkyl group R at the polyoxyalkylene chain terminal end at the 2- and 3-positions in the compound of the formula (4).

68. (original): The polyalkylene glycol derivative of the formula (p) according to claim 66, which is produced using a compound of the formula (4) as a starting material and satisfies the following parameter:

 $Hrd/Mpx1000000 \le 3$ 

Mp: a molecular weight corresponding to the peak top obtained from gel permeation chromatography of the formula (p),

Hrd: a ratio of hydroxyl group residue contained in the alkyl group R at the polyoxyalkylene chain terminal end at the 2- and 3-positions in the compound of the formula (4).

69. (original): The polyalkylene glycol derivative according to claim 61, wherein polydispersity Mw/Mn in all the peaks from the starting point of elution to the end point of elution satisfies the relationship:

 $Mw/Mn \le 1.07$ 

in gel permeation chromatography of the polyalkylene glycol derivative represented by the formula (p).

70. (original): The polyalkylene glycol derivative of the formula (p) according to claim 61, which is produced using a compound of the formula (4) as a starting material and satisfies the following parameter:

 $Hrd/Mpx 1000000 \le 3$ 

Mp: a molecular weight corresponding to the peak top obtained from gel permeation chromatography of the formula (p),

Hrd: a ratio of hydroxyl group residue contained in the alkyl group R at the polyoxyalkylene chain terminal end at the 2- and 3-positions in the compound of the formula (4).

71. (original): The polyalkylene glycol derivative of the formula (p) according to claim 69, which is produced using a compound of the formula (4) as a starting material and satisfies the following parameter:

 $Hrd/Mpx 1000000 \le 3$ 

Mp: a molecular weight corresponding to the peak top obtained from gel permeation chromatography of the formula (p),

Hrd: a ratio of hydroxyl group residue contained in the alkyl group R at the polyoxyalkylene chain terminal end at the 2- and 3-positions in the compound of the formula (4).

72. (currently amended): A process for producing the polyalkylene glycol derivative of the formula (p) comprising the following step (A):

Step (A): a step of subjecting the compound represented by the formula (4):

wherein R is a hydrocarbon group having 1 to 24 carbon atoms, OA<sup>1</sup> and OA<sup>2</sup> are each an oxyalkylene group having 2 to 4 carbon atoms, R and OA<sup>2</sup> are the same or different from each other in one molecule, the groups represented by R are the same or different from each other in one molecule, and the groups represented by OA<sup>2</sup> are the same or different from each other in one molecule, n and m are each average number of moles of the oxyalkylene group added, n represents 0 to 1000, and m represents 10 to 1000,

to a hydrogenative reduction reaction under a condition that a water content in a reaction system is 1% or less.

- 73. (original): The process according to claim 72, wherein in the step (A), palladium is used as a hydrogenative reduction catalyst, palladium is added in an amount of 1 to 20 wt% based on the compound of the formula (4), and the reaction is carried out at a temperature of 40°C or lower.
- 74. (original): The process according to claim 72, wherein as previous steps of the step (A), the following steps (B1) and (B2) are carried out:

Step (B1): a step of adding a dehalogenating agent and a compound represented by the formula (6) to a compound represented by the formula (5) and reacting them at 20 to 60°C to obtain a compound of the formula (7), provided that each charged molar ratio satisfies the following relationship:

 $Vc \ge 3Va$ 

Vb > Vc

Va: number of moles of the compound represented by the formula (5)

Vb: number of moles of the dehalogenating agent

Vc: number of moles of the compound represented by the formula (6);

Step (B2): a step of adding a compound represented by the formula (8) to the compound of the formula (7) and reacting them at 20 to 80°C to obtain a compound of the formula (4), provided that each charged molar ratio satisfies the following relationship:

Vd > Vc

Vd: number of moles of the compound represented by the formula (8);

$$CH_2(OA^1)_n$$
- $OCH_2$ - $CH(OA^2)_m$ OH .....(5)
 $CH_2(OA^2)_m$ OH

$$\begin{array}{c|c} CH_{2}(OA^{1})_{n}-OCH_{2} \\ \hline \\ O \\ CH(OA^{2})_{m}O-\ddot{S}-R^{1} \\ \hline \\ O \\ CH_{2}(OA^{2})_{m}O-\ddot{S}-R^{1} \\ \hline \\ CH_{2}(OA^{2})_{m}O-\ddot{S}-R^{1} \\ \hline \\ \end{array}$$

R—OM ....(8)

wherein R is a hydrocarbon group having 1 to 24 carbon atoms, OA<sup>1</sup> and OA<sup>2</sup> are each an oxyalkylene group having 2 to 4 carbon atoms, n and m are each average number of moles of the oxyalkylene group added, n represents 0 to 1000, m represents 10 to 1000, W is a halogen atom selected from Cl, Br and I, R<sup>1</sup> is a hydrocarbon group having 1 to 10 carbon atoms, and M is potassium or sodium.

- 75. (original): The process according to claim 74, comprising a step (B3) as a successive step of the step (B2):
- Step (B3): a step of filtrating the reaction liquid or washing the reaction liquid with an aqueous inorganic salt solution having a concentration of 10 wt% or more.
- 76. (original): The process according to claim 75, wherein the steps (B1) to (B3) are repeated after the step (B3).
- 77. (original): The process according to claim 75, wherein as previous steps of the steps (B1) to (B3), the following steps (C1) and (C2) are carried out:
- Step (C1): a step of adding sodium or potassium in an amount of 5 to 50 mol% based on a compound represented by the formula (9):

$$\begin{array}{c} CH_2(OA^1)_n-OCH_2 \\ \\ CHOH \\ \\ CH_2OH \end{array}$$

wherein OA<sup>1</sup> is an oxyalkylene group having 2 to 4 carbon atoms,

and dissolving the former at 10 to 50°C;

Step (C2): a step of reacting an alkylene oxide at 50 to 130°C.

78. (original): The process according to claim 76, wherein as previous steps of the steps (B1) to (B3), the following steps (C1) and (C2) are carried out:

Step (C1): a step of adding sodium or potassium in an amount of 5 to 50 mol% based on the compound represented by the formula (9):

wherein OA<sup>1</sup> is an oxyalkylene group having 2 to 4 carbon atoms, and dissolving the former at 10 to 50°C;

Step (C2): a step of reacting an alkylene oxide at 50 to 130°C.

- 79. (original): A modified bio-related substance, which is obtained by the process according to claim 31.
- 80. (currently amended): A process for producing an intermediate for a modified biorelated substance, represented by the formula (2), wherein the polyalkylene glycol derivative according to claim 51 is used as a starting material:

$$CH_2(OA^1)_n$$
— $X$   
 $CH(OA^2)_mOR$  .....(2)  
 $CH_2(OA^2)_mOR$ 

wherein R is a hydrocarbon group having 1 to 24 carbon atoms, OA¹ and OA² are each an oxyalkylene group having 2 to 4 carbon atoms, R and OA² are the same or different from each other in one molecule, the groups represented by R are the same or different from each other in one molecule, and the groups represented by OA² are the same or different from each other in one molecule, n and m are each average number of moles of the oxyalkylene group added, n represents 0 to 1000, m represents 10 to 1000, and X represents a functional group capable of chemically reacting with an unmodified bio-related substance.

- 81. (original): An intermediate for a modified bio-related substance, which is obtained by the process according to claim 80.
- 82. (original): A polyalkylene glycol derivative of the formula (p), which is obtained by the process according to claim 72.
- 83. (original): A process for producing a polyalkylene glycol derivative of the formula (11), comprising the following step (AA):

Step (AA): a step of subjecting a compound represented by the formula (10) to a hydrogenative reduction reaction under a condition that a water content in a reaction system is 1% or less:

$$G = \begin{bmatrix} (OCH_{2}CH_{2})_{m1} - OH \end{bmatrix} g1$$

$$G = \begin{bmatrix} (OCH_{2}CH_{2})_{m2}OR^{2} \end{bmatrix} g2$$

$$\begin{bmatrix} (OCH_{2}CH_{2})_{m3}OX^{1} \end{bmatrix} g3 \dots (11)$$

wherein G is a residual group of a compound having 2 to 4 hydroxyl groups; R<sup>2</sup> is a hydrocarbon group having 1 to 4 carbon atoms; m1, m2, and m3 represent each average number of moles of an oxyethylene group added and satisfy the following relationship:

 $0 \le m1 \le 1000, 0 \le m2 \le 1000, 0 \le m3 \le 1000, 10 \le m1 + m2 + m3 \le 1000;$ 

X<sup>1</sup> is an amino group, a carboxyl group, or a protected group thereof; and g1, g2, and g3 represent each an integer and satisfy the following relational equations:

$$1 \leq g1 \leq 3,\, 0 \leq g2,\, 0 \leq g3,\, 2 \leq g1 + g2 + g3 \leq 4.$$

84. (original): A process for producing a polyalkylene glycol derivative of the formula (11) according to claim 83, wherein in the step (AA), palladium is used as a hydrogenative reduction catalyst, palladium is added in an amount of 1 to 20 wt% based on the compound of the formula (10), and the reaction is carried out at a temperature of 40°C or lower.

85. (original): A process for producing a polyalkylene glycol derivative of the formula (16), wherein the following steps (BB1) and (BB2) are carried out:

Step (BB1): a step of adding a dehalogenating agent and a compound represented by the formula (14) to a compound represented by the formula (12) and reacting them at 20 to 60°C to obtain a compound of the formula (13), provided that each charged molar ratio satisfies the following relationship:

$$Vj \ge 1.5 \times Vh \times g5$$

Vh: number of moles of the compound represented by the formula (12)

Vi: number of moles of the dehalogenating agent

Vj: number of moles of the compound represented by the formula (14);

Step (BB2): a step of adding a compound represented by the formula (15) to the compound of the formula (13) and reacting them at 20 to 80°C to obtain a compound of the formula (16), provided that each charged molar ratio satisfies the following relationship:

Vk: number of moles of the compound represented by the formula (15):

$$\begin{bmatrix} (OCH_{2}CH_{2})_{m1} - OCH_{2} \\ \end{bmatrix}_{g4}$$

$$\begin{bmatrix} (OCH_{2}CH_{2})_{m2}OH \end{bmatrix}_{g5}$$

$$\begin{bmatrix} (OCH_{2}CH_{2})_{m3}OX^{1} \end{bmatrix}_{g6}$$
 .....(12)

$$\begin{bmatrix}
(OCH_{2}CH_{2})_{m1}-OCH_{2} & & \\
Q & Q & \\
(OCH_{2}CH_{2})_{m2}O & -R^{3} & \\
Q & Q & \\
(OCH_{2}CH_{2})_{m3}OX^{1} & & \\
Q & Q &$$

wherein G is a residual group of a compound having 2 to 4 hydroxyl groups; R<sup>2</sup> is a hydrocarbon group having 1 to 4 carbon atoms; m1, m2, and m3 represent each average number of moles of an oxyethylene group added and satisfy the following relationship:

$$0 \leq m1 \leq 1000, \, 0 \leq m2 \leq 1000, \, 0 \leq m3 \leq 1000, \, 10 \leq m1 + m2 + m3 \leq 1000;$$

X<sup>1</sup> is an amino group, a carboxyl group, or a protected group thereof; g4, g5, and g6 represent each an integer and satisfy the following relational equations:

$$0 \le g4$$
,  $1 \le g5 \le 3$ ,  $0 \le g6$ ,  $2 \le g4+g5+g6 \le 4$ ;

W is a halogen atom selected from Cl, Br and I; R<sup>3</sup> is a hydrocarbon group having 1 to 10 carbon atoms; and M is potassium or sodium.

- 86. (original): The process for producing a polyalkylene glycol derivative of the formula (16) according to claim 85, comprising a step (BB3) as a successive step of the step (BB2):
- Step (BB3): a step of filtrating the reaction liquid or washing the reaction liquid with an aqueous inorganic salt solution having a concentration of 10 wt% or more.
- 87. (original): The process for producing a polyalkylene glycol derivative of the formula (16) according to claim 86, wherein the steps (BB1) to (BB3) are repeated after the step (B3).
- 88. (currently amended): A composition, which contains a polyalkylene glycol represented by the following formula (p) and substantially does not contain polyalkylene glycol derivative having a secondary hydroxyl group:

wherein R is a hydrocarbon group having 1 to 24 carbon atoms, OA<sup>1</sup> and OA<sup>2</sup> are each an oxyalkylene group having 2 to 4 carbon atoms, R and OA<sup>2</sup> are the same or different from each other in one molecule, the groups represented by R are the same or different from each other in one molecule, and the groups represented by OA<sup>2</sup> are the same or different from each other in

one molecule, n and m are each average number of moles of the oxyalkylene group added, n represents 0 to 1000, and m represents 10 to 1000.